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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,069	10/14/2000	Sai S. Subramaniam	16515.054	8450

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EXAMINER

MCELWAIN, ELIZABETH F

ART UNIT PAPER NUMBER

1638

DATE MAILED: 09/17/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/688,069

Applicant(s)

SUBRAMANIAM ET AL.

Examiner

Elizabeth McElwain

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-41 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claims 1-41 are pending.

Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1 and 2 to the extent that the claims are drawn to a nucleic acid encoding a tocopherol cyclase active in the cyclization of 2,3-dimethyl-5-phytylplastoquinol to tocopherol, classified in Class 536, subclass 23.2, for example.

II. Claims 1 and 3 to the extent that the claims are drawn to a nucleic acid encoding a tocopherol cyclase active in the cyclization of 2,3-dimethyl-5-geranylgeranylplastoquinol to tocotrienol, classified in Class 536, subclass 23.2, for example.

III. Claims 1 and 4-9 to the extent that the claims are drawn to a tocopherol cyclase gene from eukaryotes, classified in Class 536, subclass 23.2, for example.

IV. Claims 1 and 10-12 to the extent that the claims are drawn to a tocopherol cyclase gene from prokaryotes, classified in Class 536, subclass 23.7, for example.

V. Claims 13-16, 18, 19 and 21 to the extent that the claims are drawn to a construct comprising a tocopherol cyclase gene from eukaryotes, classified in Class 435, subclass 320.1, for example.

VI. Claims 1, 2, 4, 8, 10-15 and 17-23 to the extent that the claims are drawn to a tocopherol cyclase gene from procaryotes, classified in Class 435, subclass 320.1, for example.

VII. Claim 20 drawn to feed, classified in Class 426, subclass 615, for example.

VIII. Claims 22-25 drawn to oil, classified in Class 426, subclass 601, for example.

IX. Claims 26-41 to the extent that the claims are drawn to a method of producing tocopherol in a cell, classified in Class 435, subclass 69.1, for example.

X. Claims 26-41 to the extent that the claims are drawn to a method of producing tocotrienol in a cell, classified in Class 800, subclass 281, for example.

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The inventions are distinct, each from the other because of the following reasons:

Applicants are reminded that nucleotide sequences encoding different proteins are structurally distinct chemical compounds and are unrelated to one another. These sequences are thus deemed to normally constitute **independent and distinct** inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such nucleotide sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq.

In addition, each of the inventions of Groups I-X are patentably distinct. The genes of Groups I-IV are each distinct chemical compounds that differ in structure and/or function one from each of the others. In addition, the constructs of Groups V and VI are distinct chemical compounds that differ in structure and/or function one from the other, and the constructs of Groups V and VI are distinct from the genes of each of Groups I-IV, given that the genes of Groups I-IV can be used separately from use in a construct for expression in a cell, such as for hybridization to tocopherol cyclase sequences, for example. In addition, the feed of Group VII and the oil of Group VIII are each distinct chemical compositions one from

the other, wherein one is not required by the other, and each is distinct from each of the nucleic acids of Groups I-VI, which are chemically, structurally and functionally distinct. Furthermore, the methods of Groups IX-X are distinct one from each other, wherein each uses different genes and each results in a distinct product. In addition, the methods of Groups IX-
5 X are distinct on from the products of each of Groups I-VIII, wherein each of the products can be used in a different method, such as the genes may be used for hybridization or for synthesis of the enzymes, and the oil and feed are not required for the claimed methods. Therefore, the inventions of Groups I-X are capable of being separately made, independently used and the patentability one would not render either of the other obvious or unpatentable.

10 Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown for their different classification and the requirement for additional areas of search restriction for examination purposes as indicated is proper.

Applicant is advised that the response to this requirement to be complete must include
15 an election of the invention to be examined even though the requirement be traversed.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the
20 application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth F. McElwain whose telephone number is (703) 308-1794. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at (703) 306-3218. The fax phone number for this Group is (703) 308-4242. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Any inquiry of a general nature or relating to the status of this application should be directed to the legal analyst, Gwendolyn Payne, whose telephone number is (703) 305-2475, or to the Group receptionist whose telephone number is (703) 308-0196.

Elizabeth F. McElwain, Ph.D.
September 11, 2002


ELIZABETH F. McELWAIN
PRIMARY EXAMINER
GROUP 1600